CLAIMS

What is claimed is:

1. A method of determining whether a treatment is effective in changing a status of a certain set of target cells in an individual comprising:
obtaining a sample from said individual after initiating said treatment; and
determining whether said sample comprises an expression product of at least one marker gene.

2. The method according to claim 1, wherein said target cells comprise a tumor cell.

3. The method according to claim 1 or 2, wherein said sample comprises at least one of said target cells.

4. The method according to any one of claims 1-3, wherein said sample is obtained within one week of initiating said treatment.

5. The method according to any one of claims 1-4, wherein said sample is obtained within two days of initiating said treatment.

6. The method according to any one of claims 1-5, wherein said marker gene comprises a gene involved in the generation, maintenance and/or breakdown of blood vessels.

7. The method according to any one of claims 1-6, wherein said marker gene comprises a sequence as depicted in Table 1 or Table 2.

8. The method according to any one of claims 1-7, wherein said marker gene comprises a sequence selected from the group consisting of a sequence depicted in Figure 1 through 18 or a part or analogue thereof.

9. The method according to any one of claims 1-8, wherein expression of said marker gene is quantified.

10. The method according to any one of claims 1-9, further comprising comparing expression of said marker gene with a reference value.

11. The method according to any one of claims 2-10, wherein said tumor comprises Kaposi's Sarcoma.

12. A method detecting an expression product of a marker gene comprising:
obtaining a sample from an individual;
introducing a nucleic acid to said sample, said nucleic acid selected from the group consisting of a sequence as depicted in Figure 1-18, a sequence as depicted in Table 1 and a sequence as depicted in Table 2, or a part or analogue thereof to said sample; and
determining whether said nucleic acid hybridizes in said sample.

13. A method of detecting an expression product of a marker gene comprising:
incubating a proteinaceous molecule to a sample from an individual, said proteinaceous molecule capable of specifically binding a protein encoded by a nucleic acid selected from the group consisting of a sequence as depicted in Figure 1-18, a sequence as depicted in Table 1 and a sequence as depicted in Table 2, or a part or analogue thereof; and
detecting binding between said proteinaceous molecule and said protein.

14. The method according to claim 12 or claim 13, further comprising determining the presence of a tumor cell in an individual.

15. The method according to claim 12 or claim 13, further comprising determining the presence of a site of angiogenesis in an individual.

16. The method according to claim 12 or claim 13, further comprising determining whether a treatment is effective in changing the status of a certain set of target cells in an individual.

17. The method according to any one of claim 12-16, further comprising determining whether a treatment is effective in counteracting a tumor in said individual.

18. The method according to claim 14 or 17, wherein said tumor comprises Karposi's Sarcoma.

19. A method for determining whether an individual possesses a tumor cell and/or a site of angiogenesis, comprising:
obtaining a sample from said individual; and
determining whether said sample comprises an expression product of at least one marker gene.

20. The method according to claim 19, wherein said marker gene comprises a sequence selected from the group consisting of a sequence as depicted in Figure 1-18, a sequence as depicted in Table 1, a sequence as depicted in Table 2, or a part or analogue thereof.

21. A method of determining whether an individual possesses a non-hemopoietic tumor cell and/or a site of angiogenesis, said method comprising determining whether a hemopoietic cell from said individual comprises an altered amount of an expression product of a marker gene as compared with a reference value.

22. The method according to claim 21, wherein said marker gene comprises a gene involved in angiogenesis.

23. The method according to claim 21 or 22, wherein said gene comprises a sequence selected from the group consisting of a sequence as depicted in Figure 1-18, a sequence as

depicted in Table 1, a sequence as depicted in Table 2, or a part or analogue thereof.

24. The method according to any one of claims 21-23, wherein said hemopoietic cell comprises a peripheral blood mononuclear cell.

25. A method of determining whether a treatment is effective in altering an angiogenic process in an individual comprising:
obtaining a first sample from said individual before initiating said treatment;
obtaining a second sample from said individual after initiating said treatment; and
comparing expression of an expression product of at least one marker gene in said first sample and said second sample.

26. The method according to claim 25, wherein said treatment comprises counteracting angiogenesis in said individual.

27. The method according to claim 25 or 26, wherein said marker gene comprises a sequence selected from the group consisting of a sequence as depicted in Figure 1-18, a sequence as depicted in Table 1, a sequence as depicted in Table 2, or a part or analogue thereof.

28. The method according to any one of claims 25-27, wherein said treatment involves the use of at least one drug selected from the group consisting of 2ME2, Angiostatin, Angiozyme, Anti-VEGF RhuMAb, Apra (CT-2584), Avicine, Benefin, BMS275291, Carboxyamidotriazole, CC44047, CC5013, CC7085, CDC801, CGP-41251 (PKC 412), CM101, Combretastatin A-4 Prodrug, EMD 121974, Endostatin, Flavopiridol, Genistein (GCP), Green Tea Extract, IM-862, ImmTher, Interferon alpha, Interleukin-12, Iressa (ZD1839), Marimastat, Metastat (Col-3), Neovastat, Octreotide, Paclitaxel, Penicillamine, Photofrin, Photopoint, PI-88, Prinomastat (AG-3340), PTK787 (ZK22584), RO317453, Solimastat, Squalamine, SU 101, SU 5416, SU-6668, Suradista (FCE 26644), Suramin (Metaret), Tetrathiomolybdate, Thalidomide, TNP-470, and Vitaxin.

29. The method according to any one of claims 1-11, 19-20, or 23-26, wherein said sample is a blood sample.

30. The method according to any one of claims 1-11, 19-20, or 24-27, wherein said sample comprises a peripheral blood mononuclear cell.

31. The method according to any one of claims 1-11, or 19-30, wherein said expression product comprises one of a TIE 1 sequence, a Salioadhesion or Siglec 1 sequence, a sequence as depicted in Figure 8 or Figure 17, or a part of analogue thereof.

32. A method of detecting angiogenesis comprising detecting peripheral blood mononuclear cell expression of at least one of Keratin 14 sequence, TIE 1 sequence, a Salioadhesion or Siglec 1 sequence, a sequence as depicted in Figure 2, Figure 8 or Figure 17, or a part or analogue thereof.

33. A method of determining the presence of a tumor cell in an individual comprising:
obtaining a sample from said individual; and
detecting the level of peripheral blood mononuclear cell expression of at least one of a Keratin 14 sequence, TIE 1 sequence, a Salioadhesion or Siglec 1 sequence, a sequence as depicted in Figure 2, Figure 8 or Figure 17, or an analogue thereof.

34. A method of diagnosing presence of disease comprising comparing expression of an isolated Keratin 14 sequence, TIE 1 sequence, a Salioadhesion or Siglec 1 sequence, a sequence as depicted in Figure 2, Figure 8 or Figure 17, or an analogue thereof in an individual to a reference value.

35. A diagnostic kit comprising a nucleic acid comprising a sequence selected from the group consisting of a sequence as depicted in Figures 1-18, Table 1, Table 2, or a part or analogue thereof, and a proteinaceous molecule capable of specifically binding a protein encoded

by said nucleic acid or said part or analogue thereof.

36. The diagnostic kit according to claim 35, further comprising at least one of a Keratin 14 sequence, a TIE 1 sequence, a Salioadhesion or Siglec 1 sequence, a sequence as depicted in Figure 2, Figure 8 or Figure 17, or an analogue thereof.

37. A method of determining whether a treatment is effective in changing the status of a certain set of target cells in an individual and/or altering an angiogenic process in an individual, said method comprising:
providing the diagnostic kit according to claim 35 or 36;
obtaining a sample from said individual; and
detecting the presence of an expression product of at least one marker gene in said sample.

38. A method of determining whether an individual possesses a tumor cell and/or a site of angiogenesis, said method comprising:
providing the diagnostic kit according to claim 35 or 36;
obtaining a sample from said individual; and
quantifying an expression product of at least one marker gene in said sample.

39. A method for identifying desired drug activity comprising:
determining an expression pattern of a marker gene in cells;
incubating said cells with an expression product of a gene comprising a sequence as depicted in Figure 1-18, Table 1 or Table 2; and
detecting an alteration in said expression pattern of said marker gene after said incubating.

40. A compound capable of altering the activity of at least one of Salioadhesion or Siglec 1, TIE 1, Keratin 14, and the expression of at least one of Salioadhesion or Siglec 1, TIE 1 and Keratin 14 in a cell.

41. A method of preparing a medicament comprising:

identifying a compound capable of altering the activity of at least one of Salioadhesion or Siglec 1, TIE 1, Keratin 14, and the expression of at least one of Salioadhesion or Siglec 1, TIE 1 and Keratin 14 in a cell; and

incorporating said identified compound into a medicament.